

STN Search History

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:SSPTAGXP1614

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

* * * * * Welcome to STN International * * * * *

| | | | |
|------|----|--------|---|
| NEWS | 1 | | Web Page for STN Seminar Schedule - N. America |
| NEWS | 2 | MAY 01 | New CAS web site launched |
| NEWS | 3 | MAY 08 | CA/CAPLUS Indian patent publication number format defined |
| NEWS | 4 | MAY 14 | RDISCLOSURE on STN Easy enhanced with new search and display fields |
| NEWS | 5 | MAY 21 | BIOSIS reloaded and enhanced with archival data |
| NEWS | 6 | MAY 21 | TOXCENTER enhanced with BIOSIS reload |
| NEWS | 7 | MAY 21 | CA/CAPLUS enhanced with additional kind codes for German patents |
| NEWS | 8 | MAY 22 | CA/CAPLUS enhanced with IPC reclassification in Japanese patents |
| NEWS | 9 | JUN 27 | CA/CAPLUS enhanced with pre-1967 CAS Registry Numbers |
| NEWS | 10 | JUN 29 | STN Viewer now available |
| NEWS | 11 | JUN 29 | STN Express, Version 8.2, now available |
| NEWS | 12 | JUL 02 | LEMBASE coverage updated |
| NEWS | 13 | JUL 02 | LMEDLINE coverage updated |
| NEWS | 14 | JUL 02 | SCISEARCH enhanced with complete author names |
| NEWS | 15 | JUL 02 | CHEMCATS accession numbers revised |
| NEWS | 16 | JUL 02 | CA/CAPLUS enhanced with utility model patents from China |
| NEWS | 17 | JUL 16 | CAPLUS enhanced with French and German abstracts |
| NEWS | 18 | JUL 18 | CA/CAPLUS patent coverage enhanced |
| NEWS | 19 | JUL 26 | USPATFULL/USPAT2 enhanced with IPC reclassification |
| NEWS | 20 | JUL 30 | USGENE now available on STN |
| NEWS | 21 | AUG 06 | CAS REGISTRY enhanced with new experimental property tags |
| NEWS | 22 | AUG 06 | BEILSTEIN updated with new compounds |
| NEWS | 23 | AUG 06 | FSTA enhanced with new thesaurus edition |
| NEWS | 24 | AUG 13 | CA/CAPLUS enhanced with additional kind codes for granted patents |

NEWS EXPRESS 29 JUNE 2007: CURRENT WINDOWS VERSION IS V8.2,
CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
AND CURRENT DISCOVER FILE IS DATED 05 JULY 2007.

| | |
|------------|---|
| NEWS HOURS | STN Operating Hours Plus Help Desk Availability |
| NEWS LOGIN | Welcome Banner and News Items |
| NEWS IPC8 | For general information regarding STN implementation of IPC 8 |

Enter NEWS followed by the item number or name to see news on that specific topic.

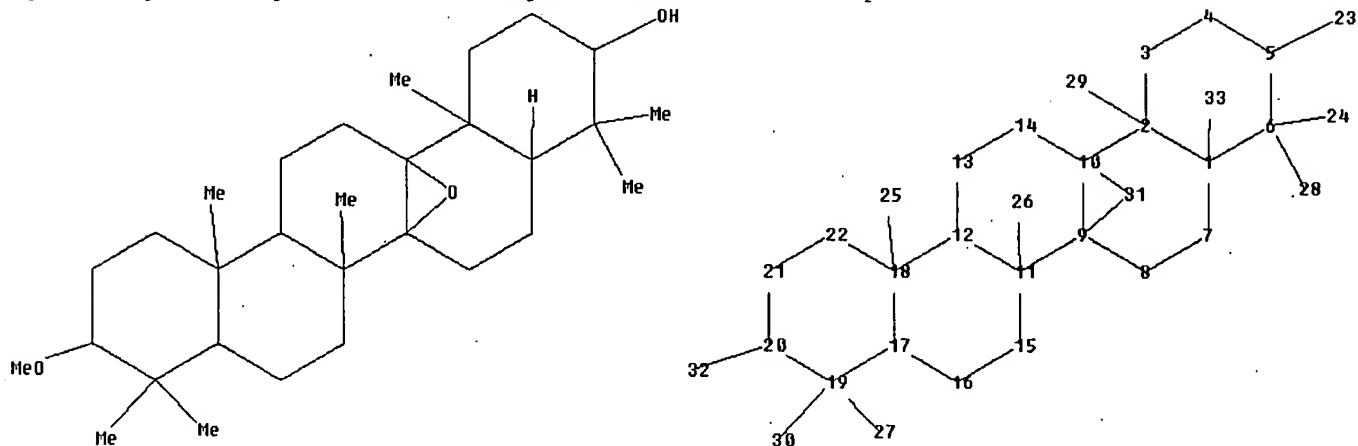
All use of STN is subject to the provisions of the STN Customer agreement. Please note that this agreement limits use to scientific research. Use for software development or design or implementation

of commercial gateways or other similar uses is prohibited and may result in loss of user privileges and other penalties.

* * * * * STN Columbus * * * * *

=>

Uploading C:\Program Files\Stnexp\Queries\10562011 Cmpd I-2.str



chain nodes :

23 24 25 26 27 28 29 30 32 33

ring nodes :

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 31

chain bonds :

1-33 2-29 5-23 6-24 6-28 11-26 18-25 19-27 19-30 20-32

ring bonds :

1-2 1-6 1-7 2-3 2-10 3-4 4-5 5-6 7-8 8-9 9-10 9-11 9-31 10-14 10-31
11-12 11-15 12-13 12-18 13-14 15-16 16-17 17-18 17-19 18-22 19-20 20-21
21-22

exact/norm bonds :

1-2 1-6 1-7 2-3 2-10 3-4 4-5 5-6 5-23 7-8 8-9 9-10 9-11 9-31 10-14
10-31 11-12 11-15 12-13 12-18 13-14 15-16 16-17 17-18 17-19 18-22 19-20
20-21 21-22

exact bonds :

1-33 2-29 6-24 6-28 11-26 18-25 19-27 19-30 20-32

Match level :

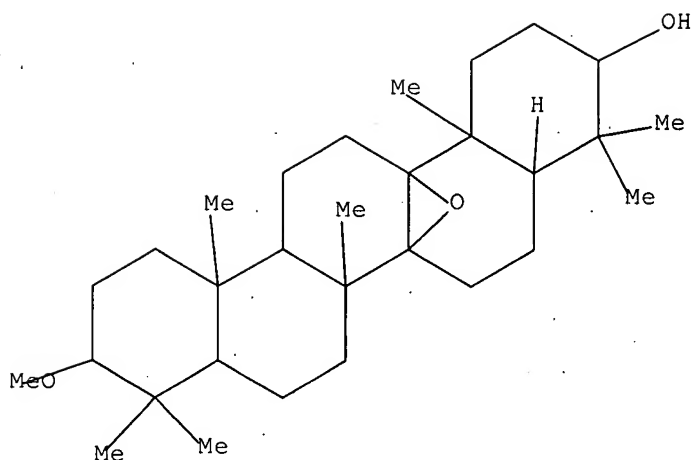
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom
11:Atom 12:Atom 13:Atom 14:Atom 15:Atom 16:Atom 17:Atom 18:Atom 19:Atom
20:Atom 21:Atom 22:Atom 23:CLASS 24:CLASS 25:CLASS 26:CLASS 27:CLASS
28:CLASS 29:CLASS 30:CLASS 31:Atom 32:CLASS 33:CLASS

L9 STRUCTURE UPLOADED

=> d 19

L9 HAS NO ANSWERS

L9 STR



Structure attributes must be viewed using STN Express query preparation.

=> s 19

SAMPLE SEARCH INITIATED 13:06:16 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 9 TO ITERATE

100.0% PROCESSED 9 ITERATIONS

0 ANSWERS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**

BATCH **COMPLETE**

PROJECTED ITERATIONS: 9 TO 360

PROJECTED ANSWERS: 0 TO 0

L10 0 SEA SSS SAM L9

=> s 19 fam full

FULL SEARCH INITIATED 13:06:35 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 25 TO ITERATE

100.0% PROCESSED 25 ITERATIONS

0 ANSWERS

SEARCH TIME: 00.00.01

L11 0 SEA FAM FUL L9

=> s 13,14,epoxy-3-methoxyserratan-21-ol/cn

L12 0 13,14,EPOXY-3-METHOXYSERRATAN-21-OL/CN

=> s 13,14,epoxy-3-methoxyserratan-21-ol

0 13,14,EPOXY

18964032 3

6 METHOXYSERRATAN

397799 21

5075710 OL

1005 OLS

5075710 OL

(OL OR OLS)

L13 0 13,14,EPOXY-3-METHOXYSERRATAN-21-OL

(13,14,EPOXY(W) 3(W) METHOXYSERRATAN(W) 21(W) OL)

```
=> s epoxy-3-methoxyserratan-21-ol
      149658 EPOXY
        1 EPOXIES
      149658 EPOXY
        (EPOXY OR EPOXIES)
      18964032 3
        6 METHOXSERRATAN
      397799 21
      5075710 OL
        1005 OLS
      5075710 OL
        (OL OR OLS)
L14      0 EPOXY-3-METHOXSERRATAN-21-OL
        (EPOXY (W) 3 (W) METHOXSERRATAN (W) 21 (W) OL)
```

```
=> logoff hold
COST IN U.S. DOLLARS          SINCE FILE      TOTAL
                                ENTRY      SESSION
FULL ESTIMATED COST          126.20      493.93
```

SESSION WILL BE HELD FOR 120 MINUTES
 STN INTERNATIONAL SESSION SUSPENDED AT 13:11:31 ON 15 AUG 2007

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:SSPTAGXP1614

PASSWORD:

* * * * * RECONNECTED TO STN INTERNATIONAL * * * * *
 SESSION RESUMED IN FILE 'REGISTRY' AT 13:27:03 ON 15 AUG 2007
 FILE 'REGISTRY' ENTERED AT 13:27:03 ON 15 AUG 2007
 COPYRIGHT (C) 2007 American Chemical Society (ACS)

```
COST IN U.S. DOLLARS          SINCE FILE      TOTAL
                                ENTRY      SESSION
FULL ESTIMATED COST          126.20      493.93
```

```
=> d hist
```

(FILE 'HOME' ENTERED AT 11:44:36 ON 15 AUG 2007)

FILE 'REGISTRY' ENTERED AT 11:45:29 ON 15 AUG 2007

```
L1      STRUCTURE UPLOADED
L2      0 S L1
L3      0 S L1 EXA FULL
L4      0 S L1 FAM FULL
L5      0 S L1 SSS FULL
L6      STRUCTURE UPLOADED
L7      0 S L6
L8      0 S L6 FAM FULL
```

FILE 'HOME' ENTERED AT 13:05:39 ON 15 AUG 2007

FILE 'REGISTRY' ENTERED AT 13:05:44 ON 15 AUG 2007

```

L9          STRUCTURE UPLOADED
L10         0 S L9
L11         0 S L9 FAM FULL
L12         0 S 13,14,EPOXY-3-METHOXYSERRATAN-21-OL/CN
L13         0 S 13,14,EPOXY-3-METHOXYSERRATAN-21-OL
L14         0 S EPOXY-3-METHOXYSERRATAN-21-OL

```

=> fil reg

| COST IN U.S. DOLLARS | SINCE FILE ENTRY | TOTAL SESSION |
|----------------------|------------------|---------------|
| FULL ESTIMATED COST | 126.65 | 494.38 |

FILE 'REGISTRY' ENTERED AT 13:27:36 ON 15 AUG 2007
 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
 PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
 COPYRIGHT (C) 2007 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file
 provided by InfoChem.

STRUCTURE FILE UPDATES: 14 AUG 2007 HIGHEST RN 944643-48-5
 DICTIONARY FILE UPDATES: 14 AUG 2007 HIGHEST RN 944643-48-5

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH June 29, 2007

Please note that search-term pricing does apply when
 conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and
 predicted properties as well as tags indicating availability of
 experimental property data in the original document. For information
 on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stndoc/properties.html>

```

=> s 13,14-Epoxy-3-methoxyserratan-21-ol
      4184 13,14
      149658 EPOXY
          1 EPOXIES
      149658 EPOXY
          (EPOXY OR EPOXIES)
      18964032 3
          6 METHOXYSERRATAN
      .397799 21
      5075710 OL
          1005 OLS
      5075710 OL
          (OL OR OLS)
L15    0 13,14-EPOXY-3-METHOXYSERRATAN-21-OL
          (13,14 (W) EPOXY (W) 3 (W) METHOXYSERRATAN (W) 21 (W) OL)

```

```

=> s Epoxy-3-methoxyserratan-ol
      149658 EPOXY
          1 EPOXIES
      149658 EPOXY
          (EPOXY OR EPOXIES)
      18964032 3
          6 METHOXYSERRATAN

```

5075710 OL
1005 OLS
5075710 OL

(OL OR OLS)

L16 0 EPOXY-3-METHOXYSERRATAN-OL
(EPOXY(W) 3(W) METHOXYSERRATAN(W) OL)

=> s Epoxymethoxyseerratan-ol
0 EPOXYMETHOXYSERRATAN
5075710 OL
1005 OLS
5075710 OL

(OL OR OLS)

L17 0 EPOXYMETHOXYSERRATAN-OL
(EPOXYMETHOXYSERRATAN(W) OL)

=> fil caplus biosis medline

| COST IN U.S. DOLLARS | SINCE FILE ENTRY | TOTAL SESSION |
|----------------------|------------------|---------------|
| FULL ESTIMATED COST | 61.20 | 555.58 |

FILE 'CAPLUS' ENTERED AT 13:29:55 ON 15 AUG 2007
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2007 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'BIOSIS' ENTERED AT 13:29:55 ON 15 AUG 2007
Copyright (c) 2007 The Thomson Corporation

FILE 'MEDLINE' ENTERED AT 13:29:55 ON 15 AUG 2007

=> s 13,14-Epoxy-3-methoxyseerratan-21-ol
L18 0 13,14-EPOXY-3-METHOXYSERRATAN-21-OL

=> s 13alpha,14alpha-Epoxy-3beta-methoxyseerratan-21beta-ol
L19 5 13ALPHA,14ALPHA-EPOXY-3BETA-METHOXYSERRATAN-21BETA-OL

=> d scan

L19 5 ANSWERS BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN
TI Cancer chemopreventive activity of 3beta-methoxyseerrat-14-en-21beta-ol and
several seerratane analogs on two-stage mouse skin carcinogenesis.

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):0

=> d l19 ibib abs hit 1-5

L19 ANSWER 1 OF 5 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN
ACCESSION NUMBER: 2005:37613 BIOSIS Full-text
DOCUMENT NUMBER: PREV200500036142
TITLE: Cancer chemopreventive activity of 3beta-methoxyseerrat-14-en-21beta-ol and several seerratane analogs on two-stage mouse skin carcinogenesis.
AUTHOR(S): Tanaka, Reiko [Reprint Author]; Shanmugasundaram, Kandasamy; Yamaguchi, Chiharu; Ishikawa, Yohei; Tokuda, Harukuni; Nishide, Kiyoharu; Node, Manabu
CORPORATE SOURCE: Dept Med Chem, Osaka Univ Pharmaceut Sci, 4-20-1 Nasahara, Takatsuki, Osaka, 5691094, Japan
tanakar@gly.oups.ac.jp
SOURCE: Cancer Letters, (October 28 2004) Vol. 214, No. 2, pp.

149-156. print.
ISSN: 0304-3835 (ISSN print).

DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 19 Jan 2005
Last Updated on STN: 19 Jan 2005

AB 3beta-Methoxyserrat-14-en-21beta-ol (1) and 3alpha-methoxyserrat-14-en-21beta-ol (2) are the most abundant triterpenoids from two *Picea* plants, *Picea jezoensis* (Sieb. et Zucc.) Carr. var. *jezoensis* and *P. jezoensis* (Sieb. et Zucc.) Carr. *hondoensis* (Mayr) Rehder. and the total yield of 1 and 2 reach over 1/3 of the chloroform extract of the above two plants. This study deals with the potential of anti-tumor promoting activity of 1 and results of the assay of 22 synthetic serratane-type triterpenoids (6)-(27) derived from 1, 2. 21-episerratenediol (3), diepiserratenediol (4) and 13alpha,14alpha-epoxy-3beta-methoxyserrat-21beta-ol (5) to discuss the structure-activity relationship. As a preliminary evaluation of their potential to inhibit tumor promotion, the inhibitory effects on Epstein-Barr virus early antigen (EBV-EA) activation induced by 12-O-tetradecanoylphorbol-13-acetate (TPA) were used. All compounds except for 12 and 19 showed potent inhibitory effects on EBV-EA induction (100% inhibition at 1000 mol ratio/TPA), their effects being stronger than that of a positive control oleanolic acid. Compounds 1, 13, 14, 18, 20 and 26 were selected to examine the effect on the in vivo two-stage mouse skin carcinogenesis test induced by 7,12-dimethylbenz(a)anthracene (DMBA) as an initiator and TPA as a promoter. The most abundant triterpenoid 1 and the synthetic compounds 13 and 14 were found to exhibit the excellent anti-tumor promoting activity in the in vivo carcinogenesis test, and compounds 18, 20 and 26 also showed strong inhibitory effects. Copyright 2004 Elsevier Ireland Ltd. All rights reserved.

AB 3beta-Methoxyserrat-14-en-21beta-ol (1) and 3alpha-methoxyserrat-14-en-21beta-ol (2) are the most abundant triterpenoids from two *Picea* plants, *Picea jezoensis* (Sieb. et Zucc.) Carr. var. *jezoensis* and *P. jezoensis* (Sieb. et Zucc.) Carr. *hondoensis* (Mayr) Rehder. and the total yield of 1 and 2 reach over 1/3 of the chloroform extract of the above two plants. This study deals with the potential of anti-tumor promoting activity of 1 and results of the assay of 22 synthetic serratane-type triterpenoids (6)-(27) derived from 1, 2. 21-episerratenediol (3), diepiserratenediol (4) and 13alpha,14alpha-epoxy-3beta-methoxyserrat-21beta-ol (5) to discuss the structure-activity relationship. As a preliminary evaluation of their potential to inhibit tumor promotion, the inhibitory effects on Epstein-Barr virus early antigen (EBV-EA) activation induced by 12-O-tetradecanoylphorbol-13-acetate (TPA) were used. All compounds except for 12 and 19 showed potent inhibitory effects on EBV-EA induction (100% inhibition at 1000 mol ratio/TPA), their effects being stronger than that of a positive control oleanolic acid. Compounds 1, 13, 14, 18, 20 and 26 were selected to examine the effect on the in vivo two-stage mouse skin carcinogenesis test induced by 7,12-dimethylbenz(a)anthracene (DMBA) as an initiator and TPA as a promoter. The most abundant triterpenoid 1 and the synthetic compounds 13 and 14 were found to exhibit the excellent anti-tumor promoting activity in the in vivo carcinogenesis test, and compounds 18, 20 and 26 also showed strong inhibitory effects. Copyright 2004 Elsevier Ireland Ltd. All rights reserved.

L19 ANSWER 2 OF 5 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN
ACCESSION NUMBER: 2001:513113 BIOSIS Full-text
DOCUMENT NUMBER: PREV200100513113
TITLE: Cancer chemopreventive agents, serratane-type triterpenoids from *Picea jezoensis*.
AUTHOR(S): Tanaka, Reiko [Reprint author]; Minami, Toshifumi; Tsujimoto, Kazuhiro; Matsunaga, Shunyo; Tokuda, Harukuni; Nishino, Hoyoku; Terada, Yukimasa; Yoshitake, Akira

CORPORATE SOURCE: Department of Medicinal Chemistry, Osaka University of
Pharmaceutical Sciences, 4-20-1 Nasahara, Takatsuki, Osaka,
569-1094, Japan
tanakar@oysun01.oups.ac.jp
SOURCE: Cancer Letters, (October 30, 2001) Vol. 172, No. 2, pp.
119-126. print.
CODEN: CALEDQ. ISSN: 0304-3835.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 31 Oct 2001
Last Updated on STN: 23 Feb 2002

AB Seven serratane-type triterpenoids isolated from the cuticle of *Picea jezoensis* (Sieb. et Zucc.) Carr. *jezoensis* (Pinaceae) and the stem bark of *Picea jezoensis* (Sieb. et Zucc.) Carr. *hondoensis* (Mayer) Rehder (Pinaceae) were studied their possible inhibitory effects on Epstein-Barr virus early antigen (EBV-EA) activation induced by 12-O- tetradecanoylphorbol-13-acetate (TPA). All compounds showed strong inhibitory effects on the EBV-EA activation, being stronger than that of oleanolic acid, which exerts on cancer preventive activity in animal carcinogenesis models. Among these compounds, 13alpha, 14alpha-epoxy-3beta-methoxyserratatan-21beta-ol and 3beta-methoxy-21alpha- hydroxyserrat-14-en-29-al were investigated for the inhibitory effects in a two-stage mouse skin carcinogenesis test on mouse skin using 7,12-dimethylbenz(a)anthracene as initiator and TPA as promoter. **13alpha, 14alpha-Epoxy-3beta-methoxyserratatan-21beta-ol** was found to exhibit the excellent anti-tumor promoting activity in the in vivo carcinogenesis test.

AB Seven serratane-type triterpenoids isolated from the cuticle of *Picea jezoensis* (Sieb. et Zucc.) Carr. *jezoensis* (Pinaceae) and the stem bark of *Picea jezoensis* (Sieb. et Zucc.) Carr. *hondoensis* (Mayer) Rehder (Pinaceae) were studied their possible inhibitory effects on Epstein-Barr virus early antigen (EBV-EA) activation induced by 12-O- tetradecanoylphorbol-13-acetate (TPA). All compounds showed strong inhibitory effects on the EBV-EA activation, being stronger than that of oleanolic acid, which exerts on cancer preventive activity in animal carcinogenesis models. Among these compounds, 13alpha, 14alpha-epoxy-3beta-methoxyserratatan-21beta-ol and 3beta-methoxy-21alpha- hydroxyserrat-14-en-29-al were investigated for the inhibitory effects in a two-stage mouse skin carcinogenesis test on mouse skin using 7,12-dimethylbenz(a)anthracene as initiator and TPA as promoter. **13alpha, 14alpha-Epoxy-3beta-methoxyserratatan-21beta-ol** was found to exhibit the excellent anti-tumor promoting activity in the in vivo carcinogenesis test.

L19 ANSWER 3 OF 5 MEDLINE on STN
ACCESSION NUMBER: 2004455415 MEDLINE Full-text
DOCUMENT NUMBER: PubMed ID: 15363540
TITLE: Cancer chemopreventive activity of 3beta-methoxyserrat-14-en-21beta-ol and several serratane analogs on two-stage mouse skin carcinogenesis.
AUTHOR: Tanaka Reiko; Shanmugasundaram Kandasamy; Yamaguchi Chiharu; Ishikawa Yohei; Tokuda Harukuni; Nishide Kiyoharu; Node Manabu
CORPORATE SOURCE: Department of Medicinal Chemistry, Osaka University of
Pharmaceutical Sciences, 4-20-1 Nasahara, Takatsuki, Osaka
569-1094, Japan.. tanakar@gly.oups.ac.jp
SOURCE: Cancer letters, (2004 Oct 28) Vol. 214, No. 2, pp. 149-56.
Journal code: 7600053. ISSN: 0304-3835.
PUB. COUNTRY: Ireland
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, NON-U.S. GOV'T)

LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200411
ENTRY DATE: Entered STN: 15 Sep 2004
Last Updated on STN: 10 Nov 2004
Entered Medline: 9 Nov 2004

AB 3beta-Methoxyserrat-14-en-21beta-ol (1) and 3alpha-methoxyserrat-14-en-21beta-ol (2) are the most abundant triterpenoids from two *Picea* plants, *Picea jezoensis* (Sieb. et Zucc.) Carr. var. *jezoensis* and *P. jezoensis* (Sieb. et Zucc.) Carr. *hondoensis* (Mayr) Rehder, and the total yield of 1 and 2 reach over 1/3 of the chloroform extract of the above two plants. This study deals with the potential of anti-tumor promoting activity of 1 and results of the assay of 22 synthetic serratane-type triterpenoids (6)-(27) derived from 1, 2, 21-episerratenediol (3), diepiserratenediol (4) and 13alpha,14alpha-epoxy-3beta-methoxyserrat-21beta-ol (5) to discuss the structure-activity relationship. As a preliminary evaluation of their potential to inhibit tumor promotion, the inhibitory effects on Epstein-Barr virus early antigen (EBV-EA) activation induced by 12-O-tetradecanoylphorbol-13-acetate (TPA) were used. All compounds except for 12 and 19 showed potent inhibitory effects on EBV-EA induction (100% inhibition at 1000 mol ratio/TPA), their effects being stronger than that of a positive control oleanolic acid. Compounds 1, 13, 14, 18, 20 and 26 were selected to examine the effect on the in vivo two-stage mouse skin carcinogenesis test induced by 7,12-dimethylbenz[a]anthracene (DMBA) as an initiator and TPA as a promoter. The most abundant triterpenoid 1 and the synthetic compounds 13 and 14 were found to exhibit the excellent anti-tumor promoting activity in the in vivo carcinogenesis test, and compounds 18, 20 and 26 also showed strong inhibitory effects.

AB 3beta-Methoxyserrat-14-en-21beta-ol (1) and 3alpha-methoxyserrat-14-en-21beta-ol (2) are the most abundant triterpenoids from two *Picea* plants, *Picea jezoensis* (Sieb. et Zucc.) Carr. var. *jezoensis* and *P. jezoensis* (Sieb. et Zucc.) Carr. *hondoensis* (Mayr) Rehder, and the total yield of 1 and 2 reach over 1/3 of the chloroform extract of the above two plants. This study deals with the potential of anti-tumor promoting activity of 1 and results of the assay of 22 synthetic serratane-type triterpenoids (6)-(27) derived from 1, 2, 21-episerratenediol (3), diepiserratenediol (4) and 13alpha,14alpha-epoxy-3beta-methoxyserrat-21beta-ol (5) to discuss the structure-activity relationship. As a preliminary evaluation of their potential to inhibit tumor promotion, the inhibitory effects on Epstein-Barr virus early antigen (EBV-EA) activation induced by 12-O-tetradecanoylphorbol-13-acetate (TPA) were used. All compounds except for 12 and 19 showed potent inhibitory effects on EBV-EA induction (100% inhibition at 1000 mol ratio/TPA), their effects being stronger than that of a positive control oleanolic acid. Compounds 1, 13, 14, 18, 20 and 26 were selected to examine the effect on the in vivo two-stage mouse skin carcinogenesis test induced by 7,12-dimethylbenz[a]anthracene (DMBA) as an initiator and TPA as a promoter. The most abundant triterpenoid 1 and the synthetic compounds 13 and 14 were found to exhibit the excellent anti-tumor promoting activity in the in vivo carcinogenesis test, and compounds 18, 20 and 26 also showed strong inhibitory effects.

L19 ANSWER 4 OF 5 MEDLINE on STN
ACCESSION NUMBER: 2001519589 MEDLINE Full-text
DOCUMENT NUMBER: PubMed ID: 11566485
TITLE: Cancer chemopreventive agents, serratane-type triterpenoids from *Picea jezoensis*.
AUTHOR: Tanaka R; Minami T; Tsujimoto K; Matsunaga S; Tokuda H; Nishino H; Terada Y; Yoshitake A
CORPORATE SOURCE: Department of Medicinal Chemistry, Osaka University of Pharmaceutical Sciences, 4-20-1 Nasahara, Takatsuki, 569-1094, Osaka, Japan.. tanakar@oysun01.oups.ac.jp

SOURCE: Cancer letters, (2001 Oct 30) Vol. 172, No. 2, pp. 119-26.
Journal code: 7600053. ISSN: 0304-3835.
PUB. COUNTRY: Ireland
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200111
ENTRY DATE: Entered STN: 24 Sep 2001
Last Updated on STN: 5 Nov 2001
Entered Medline: 1 Nov 2001

AB Seven serratane-type triterpenoids isolated from the cuticle of *Picea jezoensis* (Sieb. et Zucc.) Carr. *jezoensis* (Pinaceae) and the stem bark of *Picea jezoensis* (Sieb. et Zucc.) Carr. *hondoensis* (Mayer) Rehder (Pinaceae) were studied their possible inhibitory effects on Epstein-Barr virus early antigen (EBV-EA) activation induced by 12-O- tetradecanoylphorbol-13-acetate (TPA). All compounds showed strong inhibitory effects on the EBV-EA activation, being stronger than that of oleanolic acid, which exerts on cancer preventive activity in animal carcinogenesis models. Among these compounds, 13alpha, 14alpha-epoxy-3beta-methoxyserratatan- 21beta-ol and 3beta-methoxy-21alpha-hydroxyserrat-14-en- 29-al were investigated for the inhibitory effects in a two-stage mouse skin carcinogenesis test on mouse skin using 7,12- dimethylbenz[a]anthracene as initiator and TPA as promoter.

13alpha,14alpha-Epoxy-3beta-methoxyserratatan-21beta-ol was found to exhibit the excellent anti-tumor promoting activity in the in vivo carcinogenesis test.

AB Seven serratane-type triterpenoids isolated from the cuticle of *Picea jezoensis* (Sieb. et Zucc.) Carr. *jezoensis* (Pinaceae) and the stem bark of *Picea jezoensis* (Sieb. et Zucc.) Carr. *hondoensis* (Mayer) Rehder (Pinaceae) were studied their possible inhibitory effects on Epstein-Barr virus early antigen (EBV-EA) activation induced by 12-O- tetradecanoylphorbol-13-acetate (TPA). All compounds showed strong inhibitory effects on the EBV-EA activation, being stronger than that of oleanolic acid, which exerts on cancer preventive activity in animal carcinogenesis models. Among these compounds, 13alpha, 14alpha-epoxy-3beta-methoxyserratatan- 21beta-ol and 3beta-methoxy-21alpha-hydroxyserrat-14-en- 29-al were investigated for the inhibitory effects in a two-stage mouse skin carcinogenesis test on mouse skin using 7,12- dimethylbenz[a]anthracene as initiator and TPA as promoter.

13alpha,14alpha-Epoxy-3beta-methoxyserratatan-21beta-ol was found to exhibit the excellent anti-tumor promoting activity in the in vivo carcinogenesis test.

L19 ANSWER 5 OF 5 MEDLINE on STN
ACCESSION NUMBER: 2001477404 MEDLINE Full-text
DOCUMENT NUMBER: PubMed ID: 11520223
TITLE: Structure and stereochemistry of epoxyserratanes from the cuticle of *Picea jezoensis* var. *jezoensis*.
AUTHOR: Tanaka R; Tsujimoto K; In Y; Ishida T; Matsunaga S; Terada Y
CORPORATE SOURCE: Osaka University of Pharmaceutical Sciences, 4-20-1 Nasahara, Takatsuki, Osaka 569-1094, Japan..
tanakar@oysun01.oups.ac.jp
SOURCE: Journal of natural products, (2001 Aug) Vol. 64, No. 8, pp. 1044-7.
Journal code: 7906882. ISSN: 0163-3864.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200110

ENTRY DATE: Entered STN: 27 Aug 2001
Last Updated on STN: 29 Oct 2001
Entered Medline: 25 Oct 2001

AB Three new epoxytriterpenes, 14 beta,15 beta-epoxy-21 beta-hydroxyserratan- 3-one (1), 13 alpha,14 alpha-epoxy-21 alpha-methoxyserratan-3-one (2), and 13 alpha,14 alpha-epoxy-3 beta-methoxyserratan-21 beta-ol (3), were isolated together with two known triterpenoids, 21 alpha-methoxyserrat-13- en-3-one (4) and 21 beta-hydroxyserrat-14-en-3-one (5), from the cuticle of Picea jezoensis var. jezoensis. The structures of these new compounds were established on the basis of spectral data (NMR, MS) and single-crystal X-ray analyses (1 and 2) and partial synthesis (2 and 3).

CN 0 (13alpha,14alpha-epoxy-21alpha-methoxyserratan-3-one); 0 (13alpha,14alpha-epoxy-3beta-methoxyserratan-21beta-ol); 0 (14beta,15beta-epoxy-21beta-hydroxyserratan-3-one); 0 (Epoxy Compounds); 0 (Triterpenes)

=> logoff hold

COST IN U.S. DOLLARS

| SINCE FILE | TOTAL |
|------------|---------|
| ENTRY | SESSION |
| 36.04 | 591.62 |

FULL ESTIMATED COST

SESSION WILL BE HELD FOR 120 MINUTES

STN INTERNATIONAL SESSION SUSPENDED AT 13:32:07 ON 15 AUG 2007

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:SSPTAGXP1614

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

* * * * * Welcome to STN International * * * * *

| | | |
|------|----|--|
| NEWS | 1 | Web Page for STN Seminar Schedule - N. America |
| NEWS | 2 | MAY 01 New CAS web site launched |
| NEWS | 3 | MAY 08 CA/CAPplus Indian patent publication number format defined |
| NEWS | 4 | MAY 14 RDISCLOSURE on STN Easy enhanced with new search and display fields |
| NEWS | 5 | MAY 21 BIOSIS reloaded and enhanced with archival data |
| NEWS | 6 | MAY 21 TOXCENTER enhanced with BIOSIS reload |
| NEWS | 7 | MAY 21 CA/CAPplus enhanced with additional kind codes for German patents |
| NEWS | 8 | MAY 22 CA/CAPplus enhanced with IPC reclassification in Japanese patents |
| NEWS | 9 | JUN 27 CA/CAPplus enhanced with pre-1967 CAS Registry Numbers |
| NEWS | 10 | JUN 29 STN Viewer now available |
| NEWS | 11 | JUN 29 STN Express, Version 8.2, now available |
| NEWS | 12 | JUL 02 LEMBASE coverage updated |
| NEWS | 13 | JUL 02 LMEDLINE coverage updated |
| NEWS | 14 | JUL 02 SCISEARCH enhanced with complete author names |
| NEWS | 15 | JUL 02 CHEMCATS accession numbers revised |
| NEWS | 16 | JUL 02 CA/CAPplus enhanced with utility model patents from China |

NEWS 17 JUL 16 CAplus enhanced with French and German abstracts
NEWS 18 JUL 18 CA/CAplus patent coverage enhanced
NEWS 19 JUL 26 USPATFULL/USPAT2 enhanced with IPC reclassification
NEWS 20 JUL 30 USGENE now available on STN
NEWS 21 AUG 06 CAS REGISTRY enhanced with new experimental property tags
NEWS 22 AUG 06 BEILSTEIN updated with new compounds
NEWS 23 AUG 06 FSTA enhanced with new thesaurus edition
NEWS 24 AUG 13 CA/CAplus enhanced with additional kind codes for granted patents

NEWS EXPRESS 29 JUNE 2007: CURRENT WINDOWS VERSION IS V8.2,
CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
AND CURRENT DISCOVER FILE IS DATED 05 JULY 2007.

NEWS HOURS STN Operating Hours Plus Help Desk Availability
NEWS LOGIN Welcome Banner and News Items
NEWS IPC8 For general information regarding STN implementation of IPC 8

Enter NEWS followed by the item number or name to see news on that specific topic.

All use of STN is subject to the provisions of the STN Customer agreement. Please note that this agreement limits use to scientific research. Use for software development or design or implementation of commercial gateways or other similar uses is prohibited and may result in loss of user privileges and other penalties.

* * * * * STN Columbus * * * * *

FILE 'HOME' ENTERED AT 18:33:48 ON 15 AUG 2007

=> fil reg

| COST IN U.S. DOLLARS | SINCE FILE ENTRY | TOTAL SESSION |
|----------------------|------------------|---------------|
| FULL ESTIMATED COST | 0.21 | 0.21 |

FILE 'REGISTRY' ENTERED AT 18:34:02 ON 15 AUG 2007
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2007 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 14 AUG 2007 HIGHEST RN 944643-48-5
DICTIONARY FILE UPDATES: 14 AUG 2007 HIGHEST RN 944643-48-5

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH June 29, 2007

Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stndoc/properties.html>

```
=> s "13alpha,14alpha-epoxy-3beta-methoxyserratan-21beta-ol"
      0 "13ALPHA,14ALPHA"
      149658 "EPOXY"
      1 "EPOXIES"
      149658 "EPOXY"
      ("EPOXY" OR "EPOXIES")
      5 "3BETA"
      6 "METHOXSERRATAN"
      0 "21BETA"
      5075710 "OL"
      1005 "OLS"
      5075710 "OL"
      ("OL" OR "OLS")
L1      0 "13ALPHA,14ALPHA-EPOXY-3BETA-METHOXSERRATAN-21BETA-OL"
      ("13ALPHA,14ALPHA" (W) "EPOXY" (W) "3BETA" (W) "METHOXSERRATAN" (W) "
      21BETA" (W) "OL")
```

```
=> s methoxyserratan
L2      6 METHOXSERRATAN
```

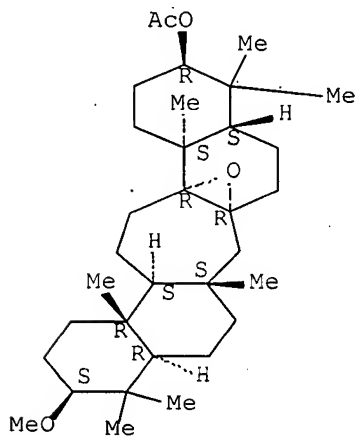
```
=> d 12 1-6
```

```
L2      ANSWER 1 OF 6  REGISTRY  COPYRIGHT 2007 ACS on STN
RN      362027-95-0  REGISTRY
ED      Entered STN:  15 Oct 2001
CN      6a,15a-Epoxy-7H-cyclohepta[1,2-a:5,4-a']dinaphthalen-3-ol,
      eicosahydro-11-methoxy-4,4,7a,10,10,13a,15b-heptamethyl-, acetate,
      (3R,4aS,6aR,7aS,9aR,11S,13aR,13bS,15aR,15bS)- (9CI)  (CA INDEX NAME)
```

OTHER NAMES:

```
CN      13 $\alpha$ ,14 $\alpha$ -Epoxy-3 $\beta$ -methoxyserratan-21 $\beta$ -yl
      acetate
FS      STEREOSEARCH
MF      C33 H54 O4
SR      CA
LC      STN Files:  CA, CAPLUS
```

Absolute stereochemistry.

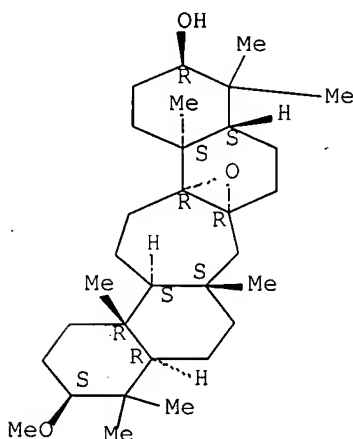


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 2 OF 6 REGISTRY COPYRIGHT 2007 ACS on STN
RN 362027-89-2 REGISTRY
ED Entered STN: 15 Oct 2001
CN 6a,15a-Epoxy-7H-cyclohepta[1,2-a:5,4-a']dinaphthalen-3-ol,
eicosahydro-11-methoxy-4,4,7a,10,10,13a,15b-heptamethyl-,
(3R,4aS,6aR,7aS,9aR,11S,13aR,13bS,15aR,15bS)- (CA INDEX NAME)
OTHER NAMES:
CN 13 α ,14 α -Epoxy-3 β -methoxyserratan-21 β -ol
CN 3 β -Methoxy-13 α ,14 α -epoxyserratan-21 β -ol
CN PJJ 34
FS STEREOSEARCH
MF C31 H52 O3
SR CA
LC STN Files: CA, CAPLUS, RTECS*, TOXCENTER
(*File contains numerically searchable property data)

Absolute stereochemistry. Rotation (+).



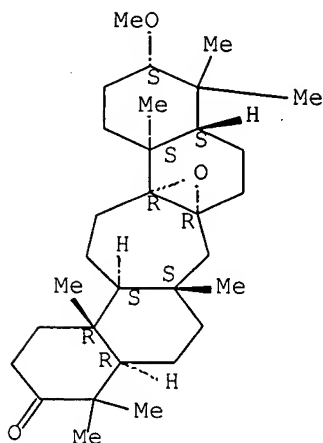
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

8 REFERENCES IN FILE CA (1907 TO DATE)
8 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 3 OF 6 REGISTRY COPYRIGHT 2007 ACS on STN
RN 362027-86-9 REGISTRY
ED Entered STN: 15 Oct 2001
CN 6a,15a-Epoxy-11H-cyclohepta[1,2-a:5,4-a']dinaphthalen-11-one,
eicosahydro-3-methoxy-4,4,7a,10,10,13a,15b-heptamethyl-,
(3S,4aS,6aR,7aS,9aR,13aR,13bS,15aR,15bS)- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 13 α ,14 α -Epoxy-21 α -methoxyserratan-3-one
FS STEREOSEARCH
MF C31 H50 O3
SR CA

LC STN Files: CA, CAPLUS, TOXCENTER

Absolute stereochemistry. Rotation (-).



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

5 REFERENCES IN FILE CA (1907 TO DATE)

5 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 4 OF 6 REGISTRY COPYRIGHT 2007 ACS on STN

RN 174023-01-9 REGISTRY

ED Entered STN: 08 Mar 1996

CN 6a,15a-Epoxy-7H-cyclohepta[1,2-a:5,4-a']dinaphthalen-3-ol,
eicosahydro-11-methoxy-4,4,7a,10,10,13a,15b-heptamethyl-,
(3R,4aS,6aS,7aS,9aR,11S,13aR,13bS,15aS,15bS)- (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN C(14a)-Homo-27-norgammaceran-21-ol, 13,14-epoxy-3-methoxy-,
(3 β ,13 β ,14 β ,21 β)-

OTHER NAMES:

CN 13 β ,14 β -Epoxy-3 β -methoxyserratan-21 β -ol

CN 3 β -Methoxy-13 β ,14 β -epoxyserratan-21 β -ol

CN PJJ 43

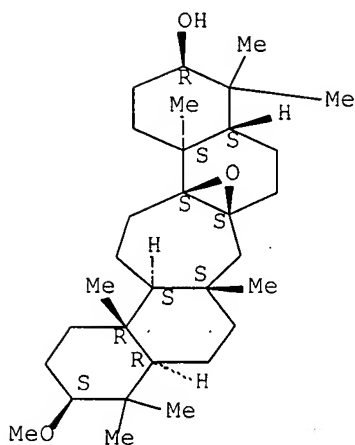
FS STEREOSEARCH

MF C31 H52 O3

SR CA

LC STN Files: CA, CAPLUS, TOXCENTER

Absolute stereochemistry. Rotation (+).

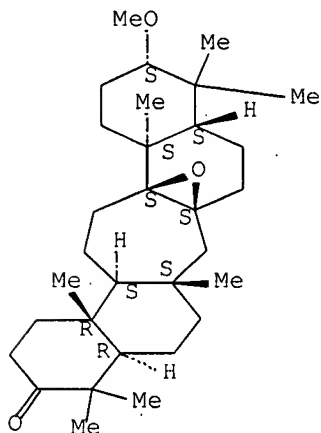


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

3 REFERENCES IN FILE CA (1907 TO DATE)
3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 5 OF 6 REGISTRY COPYRIGHT 2007 ACS on STN
RN 174023-00-8 REGISTRY
ED Entered STN: 08 Mar 1996
CN 6a,15a-Epoxy-11H-cyclohepta[1,2-a:5,4-a']dinaphthalen-11-one,
eicosahydro-3-methoxy-4,4,7a,10,10,13a,15b-heptamethyl-,
(3S,4aS,6aS,7aS,9aR,13aR,13bS,15aS,15bS)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN C(14a)-Homo-27-norgammaceran-3-one, 13,14-epoxy-21-methoxy-,
(13β,14β,21α)-
OTHER NAMES:
CN 13β,14β-Epoxy-21α-methoxyserratan-3-one
FS STEREOSEARCH
MF C31 H50 O3
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER

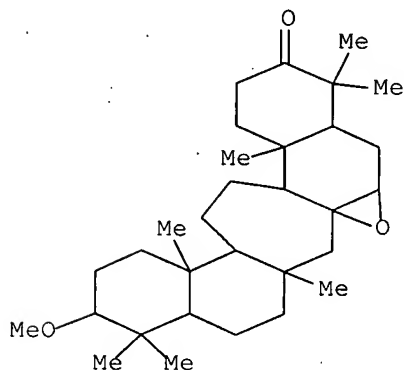
Absolute stereochemistry. Rotation (+).



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 6 OF 6 REGISTRY COPYRIGHT 2007 ACS on STN
RN 173559-47-2 REGISTRY
ED Entered STN: 27 Feb 1996
CN Naphtho[2'',1'':4',5']cyclohepta[1',2':1,2]naphth[2,3-b]oxiren-11(1H)-one,
eicosahydro-3-methoxy-4,4,6a,10,10,13a,15b-heptamethyl-,
(3S,4aR,6aS,7aS,8aR,9aR,13aS,13bR,15aS,15bR)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN C(14a)-Homo-27-norgammaceran-21-one, 14,15-epoxy-3-methoxy-,
(3 β ,14 β ,15 β)-
OTHER NAMES:
CN 14 β ,15 β -Epoxy-3 β -methoxy-14 β -serratan-21-one
CN 14 β ,15 β -Epoxy-3 β -methoxyserratan-21-one
MF C31 H50 O3
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

3 REFERENCES IN FILE CA (1907 TO DATE)
3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

=> fil caplus biosis medline
COST IN U.S. DOLLARS
FULL ESTIMATED COST

| SINCE FILE | TOTAL |
|------------|---------|
| ENTRY | SESSION |
| 48.15 | 48.36 |

FILE 'CAPLUS' ENTERED AT 18:36:23 ON 15 AUG 2007.
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2007 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'BIOSIS' ENTERED AT 18:36:23 ON 15 AUG 2007
Copyright (c) 2007 The Thomson Corporation

FILE 'MEDLINE' ENTERED AT 18:36:23 ON 15 AUG 2007

=> d hist

(FILE 'HOME' ENTERED AT 18:33:48 ON 15 AUG 2007)

FILE 'REGISTRY' ENTERED AT 18:34:02 ON 15 AUG 2007

L1 0 S "13ALPHA,14ALPHA-EPOXY-3BETA-METHOXYSERRATAN-21BETA-OL"
L2 6 S METHOXYSERRATAN

FILE 'CAPLUS, BIOSIS, MEDLINE' ENTERED AT 18:36:23 ON 15 AUG 2007

=> s 12

L3 10 L2

=> d ibib abs hit 1-10

L3 ANSWER 1 OF 10 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2006:827336 CAPLUS Full-text

DOCUMENT NUMBER: 146:243401

TITLE: Anti-initiating activity of 3 β -methoxy-
13 α ,14 α -epoxyserratan-21 β -ol (PJJ-34)
from the stem bark of *Picea jezoensis* CARR. var.
jezoensis

AUTHOR(S): Tanaka, Reiko; Minami, Toshifumi; Tokuda, Harukuni

CORPORATE SOURCE: Department of Medicinal Chemistry, Osaka University of
Pharmaceutical Sciences, 4-20-1 Nasahara, Takatsuki,
Osaka, 569-1094, Japan

SOURCE: Chemistry & Biodiversity (2006), 3(7), 818-824
CODEN: CBHIAM; ISSN: 1612-1872

PUBLISHER: Verlag Helvetica Chimica Acta AG

DOCUMENT TYPE: Journal

LANGUAGE: English

AB UV light is the major cause of skin cancers in human, and several effects of
UV light B (UVB) are thought to contribute to skin photocarcinogenesis. 3 β -
Methoxy-13 α ,14 α -epoxyserratan-21 β -ol (PJJ-34; 1) isolated from *Picea jezoensis*
CARR. var. *jezoensis* showed the strongest antitumor promoting activity among
naturally occurring triterpenoids in the in vivo two-stage mouse skin
carcinogenesis test. To investigate the anti-initiating activity, we further
studied mouse models initiated with UV-B (UVB) and promoted with 12-O-
tetradecanoylphorbol-13-acetate (TPA). Oral administration of the PJJ-34 (1)
during a period before and after the three times of UVB irradiation led to a
remarkable effect: oral administration of a 0.0025% solution of 1 only to the
test group, which started one week before and ended one week after the
irradiation, showed less than half papillomas, and inhibition of tumor
incidence and tumor multiplicity in comparison to the control group.
Therefore, it was recognized that PJJ-34 (1) showed strong anti-initiating
activity as well as anti-promoting activity. After all, 1 seems to be useful
as cancer-chemopreventive agent.

REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

IT 362027-89-2P, 3 β -Methoxy-13 α ,14 α -epoxyserratan-
21 β -ol

RL: PAC (Pharmacological activity); PUR (Purification or recovery); SPN
(Synthetic preparation); THU (Therapeutic use); BIOL (Biological study);
PREP (Preparation); USES (Uses)

(PJJ-34; preparation and chemopreventive activity of 3 β -methoxy-13 α ,14 α -epoxyserrat-21 β -ol against UVB and TPA induced carcinogenesis)

IT 174023-01-9P, PJJ 43

RL: SPN (Synthetic preparation); PREP (Preparation)

(PJJ-43; preparation and chemopreventive activity of 3 β -methoxy-13 α ,14 α -epoxyserrat-21 β -ol against UVB and TPA induced carcinogenesis)

L3 ANSWER 2 OF 10 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:750883 CAPLUS Full-text

DOCUMENT NUMBER: 141:374515

TITLE: Cancer chemopreventive activity of 3 β -methoxyserrat-14-en-21 β -ol and several serratane analogs on two-stage mouse skin carcinogenesis

AUTHOR(S): Tanaka, Reiko; Shanmugasundaram, Kandasamy; Yamaguchi, Chiharu; Ishikawa, Yohei; Tokuda, Harukuni; Nishide, Kiyoharu; Node, Manabu

CORPORATE SOURCE: Department of Medicinal Chemistry, Osaka University of Pharmaceutical Sciences, Takatsuki, Osaka, 569-1094, Japan

SOURCE: Cancer Letters (Amsterdam, Netherlands) (2004), 214(2), 149-156

CODEN: CALEDQ; ISSN: 0304-3835

PUBLISHER: Elsevier B.V.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB 3 β -Methoxyserrat-14-en-21 β -ol (1) and 3 α -methoxyserrat-14-en-21 β -ol (2) are the most abundant triterpenoids from two *Picea* plants, *Picea jezoensis* (Sieb. et Zucc.) Carr. var. *jezoensis* and *P. jezoensis* (Sieb. et Zucc.) Carr. *hondoensis* (Mayr) Rehder, and the total yield of 1 and 2 reach over 1/3 of the chloroform extract of the above two plants. This study deals with the potential of anti-tumor promoting activity of 1 and results of the assay of 22 synthetic serratane-type triterpenoids (6)-(27) derived from 1, 2, 21-episerratenediol (3), diepiserratenediol (4) and 13 α ,14 α -epoxy-3 β -methoxyserrat-21 β -ol (5) to discuss the structure-activity relationship. As a preliminary evaluation of their potential to inhibit tumor promotion, the inhibitory effects on Epstein-Barr virus early antigen (EBV-EA) activation induced by 12-O-tetradecanoylphorbol-13-acetate (TPA) were used. All compds. except for 12 and 19 showed potent inhibitory effects on EBV-EA induction (100% inhibition at 1000 mol ratio/TPA), their effects being stronger than that of a pos. control oleanolic acid. Compds. 1, 13, 14, 18, 20 and 26 were selected to examine the effect on the in vivo two-stage mouse skin carcinogenesis test induced by 7,12-dimethylbenz[a]anthracene (DMBA) as an initiator and TPA as a promoter. The most abundant triterpenoid 1 and the synthetic compds. 13 and 14 were found to exhibit the excellent anti-tumor promoting activity in the in vivo carcinogenesis test, and compds. 18, 20 and 26 also showed strong inhibitory effects.

REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

IT 1449-06-5 3604-92-0 18070-12-7 19902-59-1 19902-63-7
362027-89-2 783343-55-5 783343-58-8 783343-65-7
783343-69-1 783343-72-6 783343-75-9 783343-77-1 783343-80-6
783343-82-8 783343-86-2 783343-89-5 783343-91-9 783343-93-1
783343-94-2 783343-96-4 783343-98-6 783344-00-3 783344-02-5
783344-03-6 783344-04-7 783359-47-7

RL: PAC (Pharmacological activity); BIOL (Biological study)

(cancer chemopreventive activity of 3 β -methoxyserrat-14-en-

21 β -ol and several serratane analogs on two-stage mouse skin
carcinogenesis)

L3 ANSWER 3 OF 10 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:573248 CAPLUS Full-text

DOCUMENT NUMBER: 141:288675

TITLE: Cancer chemopreventive activity of serratane-type
triterpenoids from *Picea jezoensis*

AUTHOR(S): Tanaka, Reiko; Minami, Toshifumi; Ishikawa, Yohei;
Tokuda, Harukuni; Matsunaga, Shunyo

CORPORATE SOURCE: Department of Medicinal Chemistry, Osaka University of
Pharmaceutical Sciences, Osaka, 569-1094, Japan

SOURCE: Chemistry & Biodiversity (2004), 1(6), 878-885

CODEN: CBHIAM; ISSN: 1612-1872

PUBLISHER: Verlag Helvetica Chimica Acta AG

DOCUMENT TYPE: Journal

LANGUAGE: English

AB To search for cancer chemopreventive agents from natural sources, 13 α ,14 α -
epoxy-21 α -methoxyserrat-3-one, 21 α -methoxyserrat-13-en-3-one, and 21 α -
hydroxy-3 β - methoxyserrat-14-en-30-al isolated from the cuticle of *Picea*
jezoensis (SIEB. et ZUCC.) CARR. var. *jezoensis* (Pinaceae) were investigated
for inhibitory effects in a two-stage mouse skin carcinogenesis test on mouse
skin with 7,12-dimethylbenz[a]anthracene (DMBA) as initiator and 12-O-
tetradecanoylphorbol-13-acetate (TPA) as promoter. 21 α -Hydroxy-3 β -
methoxyserrat-14-en-30-al and 13 α ,14 α -epoxy-21 α -methoxyserrat-3-one were
found to exhibit strong antitumor-promoting activities in the in vivo
carcinogenesis test.

REFERENCE COUNT: 15 .THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

IT 155601-47-1 174158-64-6 174158-65-7 206354-89-4 206443-34-7
362027-86-9 362027-89-2

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL
(Biological study); USES (Uses)

(cancer chemopreventive activity of serratane-type triterpenoids from
Picea jezoensis)

L3 ANSWER 4 OF 10 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:310063 CAPLUS Full-text

DOCUMENT NUMBER: 140:315052

TITLE: Compositions having tumor cell killing activity
containing serratane triterpenoids

INVENTOR(S): Tanaka, Reiko

PATENT ASSIGNEE(S): Sumitomo Chemical Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 21 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

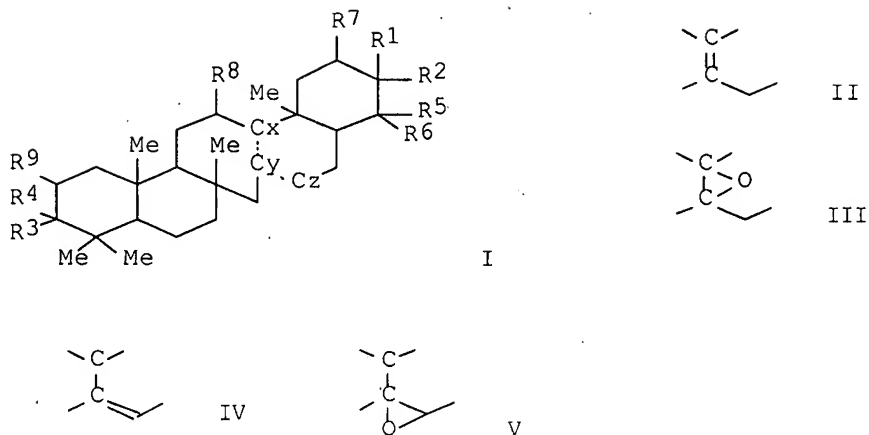
LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|--------|------------|-----------------|----------|
| JP 2004115408 | A | 20040415 | JP 2002-278715 | 20020925 |
| PRIORITY APPLN. INFO.: | | | JP 2002-278715 | 20020925 |
| OTHER SOURCE(S): | MARPAT | 140:315052 | | |

GI



AB The comps. contain I [R1 = OH, alkoxy, acyloxy; R2 = H, or R1R2 = :O; R3 = OH, alkoxy, acryloxy; R4 = H or R3R4 = :O; R5, R6 = Me, CHO, CO2H, CO2R10 (R10 = lower alkyl); R7-R9 = H, OH, alkoxy, acyloxy; partial structure CxCyCz = II, III, IV, V] or their pharmaceutically acceptable salts. Bark of *Picea jezoensis* was extracted with CH2Cl2 and the extract was fractionated via some steps to give 7 serratane triterpenoids. 13 α ,14 α -Epoxy-3 β -methoxyserratatan-21 β -ol showed antitumor activity against human tumor cell lines derived from mammary cancers, central nervous system tumors, colorectal cancers, lung cancers, melanomas, ovarian cancers, renal cancers, gastric cancers, and prostatic cancers.

IT 3604-92-0P, Diepiserratenediol 19902-59-1P, 3 β -Methoxyserrat-14-en-21 β -ol 19902-63-7P, 3 α -Methoxyserrat-14-en-21 β -ol 155601-47-1P, 21 α -Methoxyserrat-13-en-3-one 173559-47-2P, 14 β ,15 β -Epoxy-3 β -methoxyserratatan-21-one 173559-48-3P 206443-34-7P, 21 α -Hydroxy-3 β -methoxyserrat-14-en-29-al 362027-83-6P, 14 β ,15 β -Epoxy-21 β -hydroxyserratatan-3-one 362027-86-9P, 13 α ,14 α -Epoxy-21 α -methoxyserratatan-3-one 362027-89-2P, 13 α ,14 α -Epoxy-3 β -methoxyserratatan-21 β -ol 362027-92-7P, 21 β -Hydroxyserrat-14-en-3-one 678969-41-0P

RL: PAC (Pharmacological activity); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(extraction of serratane triterpenoids from bark of *Picea jezoensis* and *P. jezoensis hondoensis* and their antitumor activity)

L3 ANSWER 5 OF 10 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:38706 CAPLUS [Full-text](#)

DOCUMENT NUMBER: 141:136984

TITLE: Two new anti-tumor promoting serratane-type triterpenoids from the stem bark of *Picea jezoensis* var. *jezoensis*

AUTHOR(S): Tanaka, Reiko; Ishikawa, Yohei; Minami, Toshifumi; Minoura, Katsuhiko; Tokuda, Harukuni; Matsunaga, Shunyo

CORPORATE SOURCE: Osaka University of Pharmaceutical Sciences, Osaka, Japan

SOURCE: *Planta Medica* (2003), 69(11), 1041-1047

PUBLISHER: Georg Thieme Verlag
DOCUMENT TYPE: Journal
LANGUAGE: English
GI

CODEN: PLMEAA; ISSN: 0032-0943

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Two new serratane-type triterpenoids were isolated from the stem bark of *P. jezoensis* Carr. var. *jezoensis* (Pinaceae). Their structures were determined to be 3 β -methoxyserrat-13-en-21 β -ol (I) and 13 β ,14 β - epoxy-3 β -methoxyserratan-21 β -ol (II) on the basis of spectroscopic methods and partial synthesis. I and II and their acetates were screened as potential anti-tumor promoters by using the in vitro short-term 12-O-tetradecanoylphorbol 13-acetate (TPA)-induced Epstein-Barr virus early antigen (EBV-EA) activation assay. IC50 value evaluation showed that I was more effective than others. In addition, I and II were examined for anti-tumor promoting activities in a 2-stage carcinogenesis assay of mouse skin tumors induced by 7,12-dimethylbenz[*a*]anthracene (DMBA) as an initiator and TPA as a promoter. I and II exhibited significant anti-tumor promoting effects on mouse skin carcinogenesis.

REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

IT 174023-01-9P, 13 β ,14 β -Epoxy-3 β -methoxyserratan-21 β -ol
RL: BSU (Biological study, unclassified); NPO (Natural product occurrence); PRP (Properties); PUR (Purification or recovery); SPN (Synthetic preparation); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation)

(two new anti-tumor promoting serratane-type triterpenoids from the stem bark of *Picea jezoensis* var. *jezoensis*)

IT 362027-89-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(two new anti-tumor promoting serratane-type triterpenoids from the stem bark of *Picea jezoensis* var. *jezoensis*)

L3 ANSWER 6 OF 10 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2002:727037 CAPLUS Full-text
DOCUMENT NUMBER: 137:242159
TITLE: Carcinogenesis promotion inhibitors containing serratane-type triterpenoids
INVENTOR(S): Tanaka, Reiko; Yoshitake, Akira
PATENT ASSIGNEE(S): Sumitomo Chemical Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|-------------------|-----------------|----------|
| ----- | ---- | ----- | ----- | ----- |
| JP 2002275057 | A | 20020925 | JP 2001-80474 | 20010321 |
| PRIORITY APPLN. INFO.: | | | JP 2001-80474 | 20010321 |
| OTHER SOURCE(S): | | MARPAT 137:242159 | | |

AB The invention provides serratane-type triterpenoids esp. isolated from *Picea jezoensis* or *Picea jezoensis hondoensis* as carcinogenesis promotion inhibitors. A compound 13 α -,14 α -Epoxy-3 β -methoxyserrat-21 β -ol was isolated from *Picea jezoensis* bark and its inhibitory effects on Epstein-Barr virus early antigen (EBV-EA) activation induced by 2-O-tetradecanoylphorbol-13-acetate (TPA) was tested.

IT 3604-92-0P, Diepiserratenediol 19902-59-1P, 3 β -Methoxyserrat-14-en-21 β -ol 19902-63-7P, 3 α -Methoxyserrat-14-en-21 β -ol 155601-47-1P, 21 α -Methoxyserrat-13-en-3-one 173559-47-2P, 14 β ;15 β -Epoxy-3 β -methoxyserrat-21-one 173559-48-3P 206354-89-4P 206443-34-7P, 21 α -Hydroxy-3 β -methoxyserrat-14-en-29-al 362027-83-6P, 14 β ,15 β -Epoxy-21 β -hydroxyserrat-3-one 362027-86-9P, 13 α ,14 α -Epoxy-21 α -methoxyserrat-3-one 362027-89-2P, 13 α -,14 α -Epoxy-3 β -methoxyserrat-21 β -ol 362027-92-7P, 21 β -Hydroxyserrat-14-en-3-one
RL: PAC (Pharmacological activity); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(carcinogenesis promotion inhibitors containing serratane-type triterpenoids)

L3 ANSWER 7 OF 10 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2001:686777 CAPLUS Full-text

DOCUMENT NUMBER: 136:79360

TITLE: Cancer chemopreventive agents, serratane-type triterpenoids from *Picea jezoensis*

AUTHOR(S): Tanaka, R.; Minami, T.; Tsujimoto, K.; Matsunaga, S.; Tokuda, H.; Nishino, H.; Terada, Y.; Yoshitake, A.

CORPORATE SOURCE: Department of Medicinal Chemistry, Osaka University of Pharmaceutical Sciences, Takatsuki, Osaka, 569-1094, Japan

SOURCE: Cancer Letters (Shannon, Ireland) (2001), 172(2), 119-126

CODEN: CALEDQ; ISSN: 0304-3835

PUBLISHER: Elsevier Science Ireland Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Seven serratane-type triterpenoids isolated from the cuticle of *Picea jezoensis* (Sieb. et Zucc.) Carr. *jezoensis* (Pinaceae) and the stem bark of *Picea jezoensis* (Sieb. et Zucc.) Carr. *hondoensis* (Mayer) Rehder (Pinaceae) were studied their possible inhibitory effects on Epstein-Barr virus early antigen (EBV-EA) activation induced by 12-O-tetradecanoylphorbol-13-acetate (TPA). All compds. showed strong inhibitory effects on the EBV-EA activation, being stronger than that of oleanolic acid, which exerts on cancer preventive activity in animal carcinogenesis models. Among these compds., 13 α , 14 α -epoxy-3 β -methoxyserrat-21 β -ol and 3 β -methoxy-21 α -hydroxyserrat-14-en-29-al were investigated for the inhibitory effects in a two-stage mouse skin carcinogenesis test on mouse skin using 7,12-dimethylbenz[a]anthracene as initiator and TPA as promoter. 13 α ,14 α -Epoxy-3 β -methoxyserrat-21 β -ol was found to exhibit the excellent antitumor promoting activity in the in vivo carcinogenesis test.

REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

IT 19902-59-1P 19902-63-7P 155601-47-1P 206354-89-4P 206443-34-7P 362027-86-9P 362027-89-2P

RL: PAC (Pharmacological activity); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES

(Uses)

(cancer chemopreventive agents, serratane-type triterpenoids from *Picea jezoensis*)

L3 ANSWER 8 OF 10 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2001:538356 CAPLUS Full-text
DOCUMENT NUMBER: 135:254482
TITLE: Structure and stereochemistry of epoxyserratanes from
the cuticle of *Picea jezoensis* var. *jezoensis*
AUTHOR(S): Tanaka, Reiko; Tsujimoto, Kazuhiro; In, Yasuko;
Ishida, Toshimasa; Matsunaga, Shunyo; Terada, Yukimasa
CORPORATE SOURCE: Osaka University of Pharmaceutical Sciences,
Takatsuki, Osaka, 569-1094, Japan
SOURCE: Journal of Natural Products (2001), 64(8), 1044-1047
CODEN: JNPRDF; ISSN: 0163-3864
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Three new epoxytriterpenes, 14 β ,15 β -epoxy-21 β -hydroxyserrat-3-one (I),
13 α ,14 α -epoxy-21 α -methoxyserrat-3-one (II), and 13 α ,14 α -epoxy-3 β -
methoxyserrat-21 β -ol (III), were isolated together with two known
triterpenoids, 21 α -methoxyserrat-13-en-3-one and 21 β -hydroxyserrat-14-en-3-
one, from the cuticle of *Picea jezoensis* var. *jezoensis*. The structures of
these new compds. were established on the basis of spectral data (NMR, MS) and
single-crystal X-ray analyses (I and II) and partial synthesis (II and III).

REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

IT 362027-83-6P, 14 β ,15 β -Epoxy-21 β -hydroxyserrat-3-one
362027-89-2P

RL: BOC (Biological occurrence); BSU (Biological study, unclassified); PRP
(Properties); PUR (Purification or recovery); BIOL (Biological study);
OCCU (Occurrence); PREP (Preparation)
(epoxyserratanes from *Picea jezoensis* var. *jezoensis*)

IT 362027-86-9P

RL: BOC (Biological occurrence); BSU (Biological study, unclassified); PRP
(Properties); PUR (Purification or recovery); SPN (Synthetic preparation);
BIOL (Biological study); OCCU (Occurrence); PREP (Preparation)
(epoxyserratanes from *Picea jezoensis* var. *jezoensis*)

IT 362027-95-0P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation and properties of)

L3 ANSWER 9 OF 10 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1996:133101 CAPLUS Full-text
DOCUMENT NUMBER: 124:170561
TITLE: Two New Epoxyserratanes from the Cuticle of *Picea*
jezoensis
AUTHOR(S): Tanaka, Reiko; Ohmori, Kohji; Minoura, Katsuhiko;
Matsunaga, Shunyo
CORPORATE SOURCE: Osaka University of Pharmaceutical Sciences,
Matsubara, 580, Japan
SOURCE: Journal of Natural Products (1996), 59(3), 237-41

CODEN: JNPRDF; ISSN: 0163-3864

PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Two new satd. serratane triterpenes were isolated, together with the known compds. 21β -methoxyserrat-14-en-3-one and 3β -methoxyserrat-14-en-21-one, from the cuticle of *Picea jezoensis* Carr. *jezoensis*. Their structures were established as $14\beta,15\beta$ -epoxy- 3β -methoxyserratan-21-one and $14\beta,15\beta$ -epoxy- 3β -methoxyserratan-21 β -ol on the basis of chemical and spectral evidence.

IT 173559-47-2P, $14\beta,15\beta$ -Epoxy- 3β -methoxyserratan-21-one 173559-48-3P, $14\beta,15\beta$ -Epoxy- 3β -methoxyserratan-21 β -ol

RL: BOC (Biological occurrence); BSU (Biological study, unclassified); PRP (Properties); PUR (Purification or recovery); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation)
(from *Picea jezoensis* cuticle)

L3 ANSWER 10 OF 10 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1996:78069 CAPLUS Full-text

DOCUMENT NUMBER: 124:198122

TITLE: Chemical constituents of the cuticle of *Picea jezoensis* Carr. *jezoensis*; on the structures and biogenesis of epoxyserratanes, picane, and novel triterpenes having an unusual skeletal system named "Jezane"

AUTHOR(S): Tanaka, Reiko; Tsujimoto; In, Yasuko; Matsunaga, Shunyo; Muraoka, Osamu

CORPORATE SOURCE: Osaka University of Pharmaceutical Sciences, Japan
SOURCE: Tennen Yuki Kagobutsu Toronkai Koen Yoshishu (1995), 37th, 361-6

CODEN: TYKYDS

PUBLISHER: Nippon Kagakkai
DOCUMENT TYPE: Journal
LANGUAGE: Japanese

AB The structures and antitumor-promoting activity of 3 triterpenoids bearing a novel skeletal system of 14(13 \rightarrow 12)abeo-12 α H-serratane, for which we named "picane", isolated from the stem bark of *P. jezoensis* were previously reported. The above study prompted the search for another new constituents having more potent biol. activity from the bark of *P. jezoensis*. Recently, the isolation and the structure elucidation of 21 α -hydroxy- 3β -methoxyserrat-14-en-30-al and 3 $14\beta,15\beta$ -serratanes from the cuticle of the latter tree were reported. Further examination of the cuticle led to the isolation of 6 new triterpenoids involving jezanals A and B, having a novel skeletal system of 16(15 \rightarrow 14)abeo-13 β H-serratane which was given the name of "Jezane", and their structures were established as 21 α -methoxyserrat-13-ene-3,15-dione, $13\beta,14\beta$ -epoxy-21 α -methoxyserratan-3-one, $13\beta,14\beta$ -epoxy- 3β -methoxyserratan-21 β -ol, 14β -hydroxypicane-3,13,21-trione, 21 β -hydroxy- 3β -methoxyjezan-15 β -al (15) and 21 β -hydroxy-3 α -methoxyjezan-15 β -al (16), by chemical, spectral and single crystal x-ray anal. evidence. The most probable bio-synthetical routes of 15 and 16 from the known serrat-14-enes via corresponding epoxy-derivs. were also discussed on the basis of success in their 1-step bio-mimetic syntheses using MCPBA and BF₃-etherate.

IT 174022-99-2P 174023-00-8P 174023-01-9P 174023-02-0P

174158-64-6P, 21 β -Hydroxy- 3β -methoxyjezan-15 β -al

174158-65-7P, 21 β -Hydroxy-3 α -methoxyjezan-15 β -al

RL: ANT (Analyte); BOC (Biological occurrence); BSU (Biological study, unclassified); PRP (Properties); PUR (Purification or recovery); ANST

(Analytical study); BIOL (Biological study); OCCU (Occurrence); PREP
(Preparation)
(chemical constituents of Picea jezoensis cuticles)

=> logoff hold

| COST IN U.S. DOLLARS | SINCE FILE ENTRY | TOTAL SESSION |
|--|---------------------|------------------|
| FULL ESTIMATED COST | 33.69 | 82.05 |
| DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS) | SINCE FILE ENTRY | TOTAL SESSION |
| CA SUBSCRIBER PRICE | -7.80 | -7.80 |

SESSION WILL BE HELD FOR 120 MINUTES
STN INTERNATIONAL SESSION SUSPENDED AT 18:37:09 ON 15 AUG 2007

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:SSPTAGXP1614

PASSWORD:

* * * * * RECONNECTED TO STN INTERNATIONAL * * * * *
SESSION RESUMED IN FILE 'CAPLUS, BIOSIS, MEDLINE' AT 19:09:45 ON 15 AUG 2007
FILE 'CAPLUS' ENTERED AT 19:09:45 ON 15 AUG 2007
COPYRIGHT (C) 2007 AMERICAN CHEMICAL SOCIETY (ACS)
FILE 'BIOSIS' ENTERED AT 19:09:45 ON 15 AUG 2007
Copyright (c) 2007 The Thomson Corporation
FILE 'MEDLINE' ENTERED AT 19:09:45 ON 15 AUG 2007

| COST IN U.S. DOLLARS | SINCE FILE ENTRY | TOTAL SESSION |
|--|---------------------|------------------|
| FULL ESTIMATED COST | 33.69 | 82.05 |
| DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS) | SINCE FILE ENTRY | TOTAL SESSION |
| CA SUBSCRIBER PRICE | -7.80 | -7.80 |

=> d hist

(FILE 'HOME' ENTERED AT 18:33:48 ON 15 AUG 2007)

FILE 'REGISTRY' ENTERED AT 18:34:02 ON 15 AUG 2007

L1 0 S "13ALPHA,14ALPHA-EPOXY-3BETA-METHOXYSERRATAN-21BETA-OL"
L2 6 S METHOXYSERRATAN

FILE 'CAPLUS, BIOSIS, MEDLINE' ENTERED AT 18:36:23 ON 15 AUG 2007

L3 10 S L2

=> s lung

L4 1029444 LUNG

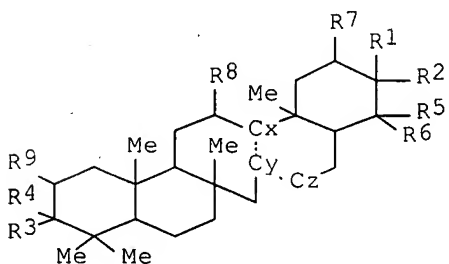
=> s l3 and l4

L5 1 L3 AND L4

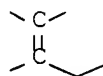
=> d ibib abs

L5 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:310063 CAPLUS Full-text
DOCUMENT NUMBER: 140:315052
TITLE: Compositions having tumor cell killing activity
containing serratane triterpenoids
INVENTOR(S): Tanaka, Reiko
PATENT ASSIGNEE(S): Sumitomo Chemical Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 21 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

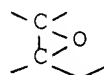
| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|-------------------|-----------------|----------|
| JP 2004115408 | A | 20040415 | JP 2002-278715 | 20020925 |
| PRIORITY APPLN. INFO.: | | | JP 2002-278715 | 20020925 |
| OTHER SOURCE(S): | | MARPAT 140:315052 | | |
| GI | | | | |



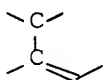
I



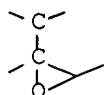
II



III



IV



V

AB The comps. contain I [R1 = OH, alkoxy, acyloxy; R2 = H, or R1R2 = :O; R3 = OH, alkoxy, acryloxy; R4 = H or R3R4 = :O; R5, R6 = Me, CHO, CO2H, CO2R10 (R10 = lower alkyl); R7-R9 = H, OH, alkoxy, acyloxy; partial structure CxCyCz = II, III, IV, V] or their pharmaceutically acceptable salts. Bark of *Picea jezoensis* was extracted with CH2Cl2 and the extract was fractionated via some steps to give 7 serratane triterpenoids. 13 α ,14 α -Epoxy-3 β -methoxyserratane-21 β -ol showed antitumor activity against human tumor cell lines derived from mammary cancers, central nervous system tumors, colorectal cancers, lung cancers, melanomas, ovarian cancers, renal cancers, gastric cancers, and prostatic cancers.

=> file reg

| | | |
|--|------------|---------|
| COST IN U.S. DOLLARS | SINCE FILE | TOTAL |
| FULL ESTIMATED COST | ENTRY | SESSION |
| | 41.22 | 89.58 |
| DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS) | SINCE FILE | TOTAL |
| CA SUBSCRIBER PRICE | ENTRY | SESSION |
| | -8.58 | -8.58 |

FILE 'REGISTRY' ENTERED AT 19:13:38 ON 15 AUG 2007
 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
 PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
 COPYRIGHT (C) 2007 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file
 provided by InfoChem.

STRUCTURE FILE UPDATES: 14 AUG 2007 HIGHEST RN 944643-48-5
 DICTIONARY FILE UPDATES: 14 AUG 2007 HIGHEST RN 944643-48-5

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH June 29, 2007

Please note that search-term pricing does apply when
 conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and
 predicted properties as well as tags indicating availability of
 experimental property data in the original document. For information
 on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stndoc/properties.html>

=> d hsit

YOU HAVE REQUESTED DATA FROM FILE 'CAPLUS' - CONTINUE? (Y)/N:n

=> d hist

(FILE 'HOME' ENTERED AT 18:33:48 ON 15 AUG 2007)

FILE 'REGISTRY' ENTERED AT 18:34:02 ON 15 AUG 2007

L1 0 S "13ALPHA,14ALPHA-EPOXY-3BETA-METHOXYSERRATAN-21BETA-OL"
 L2 6 S METHOXYSERRATAN

FILE 'CAPLUS, BIOSIS, MEDLINE' ENTERED AT 18:36:23 ON 15 AUG 2007

L3 10 S L2
 L4 1029444 S LUNG
 L5 1 S L3 AND L4

FILE 'REGISTRY' ENTERED AT 19:13:38 ON 15 AUG 2007

=> s serratan

L6 14 SEERRATAN

=> d l6

L6 ANSWER 1 OF 14 REGISTRY COPYRIGHT 2007 ACS on STN
 RN 925426-80-8 REGISTRY
 ED Entered STN: 07 Mar 2007

CN 1H-Cyclohepta[1,2-a:5,4-a']dinaphthalene-4-carboxylic acid,
docosahydro-3,7a,8,11-tetrahydroxy-10-(hydroxymethyl)-4,6a,10,13a,15b-
pentamethyl-, (3R,4R,4aR,6aS,7aR,8S,9aR,10S,11S,13aS,13bR,15aS,15bR)- (CA
INDEX NAME)

OTHER NAMES:

CN (3 α ,14 α ,15 α ,21 α)-3,14,15,21,29-
Pentahydroxyserratan-24-oic acid

CN 3,21-Diepilycernuic acid C

CN Lycernuic acid F

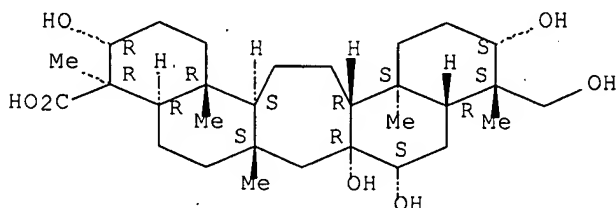
FS STEREOSEARCH

MF C30 H50 O7

SR CA

LC STN Files: CA, CAPLUS

Absolute stereochemistry. Rotation (-).



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

=> fil caplus biosis medline

| | | |
|--|------------|---------|
| COST IN U.S. DOLLARS | SINCE FILE | TOTAL |
| | ENTRY | SESSION |
| FULL ESTIMATED COST | 7.80 | 97.38 |
| DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS) | SINCE FILE | TOTAL |
| | ENTRY | SESSION |
| CA SUBSCRIBER PRICE | 0.00 | -8.58 |

FILE 'CAPLUS' ENTERED AT 19:15:02 ON 15 AUG 2007
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2007 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'BIOSIS' ENTERED AT 19:15:02 ON 15 AUG 2007
Copyright (c) 2007 The Thomson Corporation

FILE 'MEDLINE' ENTERED AT 19:15:02 ON 15 AUG 2007.

=> d hist

(FILE 'HOME' ENTERED AT 18:33:48 ON 15 AUG 2007)

FILE 'REGISTRY' ENTERED AT 18:34:02 ON 15 AUG 2007

L1 0 S "13ALPHA,14ALPHA-EPOXY-3BETA-METHOXYSERRATAN-21BETA-OL"
L2 6 S METHOXYSERRATAN

FILE 'CAPLUS, BIOSIS, MEDLINE' ENTERED AT 18:36:23 ON 15 AUG 2007

L3 10 S L2
L4 1029444 S LUNG
L5 1 S L3 AND L4

FILE 'REGISTRY' ENTERED AT 19:13:38 ON 15 AUG 2007

L6 14 S SERRATAN

FILE 'CAPLUS, BIOSIS, MEDLINE' ENTERED AT 19:15:02 ON 15 AUG 2007

=> s l6 and l4

L7 1 L6 AND L4

=> s pulmonary

L8 1067199 PULMONARY

=> s l8 and l6

L9 0 L8 AND L6

=> logoff hold

COST IN U.S. DOLLARS

| SINCE FILE | TOTAL |
|------------|---------|
| ENTRY | SESSION |
| 4.88 | 102.26 |

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

| SINCE FILE | TOTAL |
|------------|---------|
| ENTRY | SESSION |
| 0.00 | -8.58 |

CA SUBSCRIBER PRICE

SESSION WILL BE HELD FOR 120 MINUTES

STN INTERNATIONAL SESSION SUSPENDED AT 19:16:01 ON 15 AUG 2007